

REMARKS

Entry of the foregoing amendments to the application is requested on the grounds that the claims, as amended, patentably distinguish over the cited art of record or, alternatively, place the application in better condition for appeal. The claims more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. No new issues have been added which would require further consideration and/or search, nor has any new matter been added. The claims, as amended, are believed to avoid the rejections applied in the Final Office Action for reasons set forth more fully below.

The Final Office Action of May 11, 2009 has been received and carefully reviewed. It is submitted that, by this Amendment, all bases of rejection are traversed and overcome. Upon entry of this Amendment, claims 1-44 and 46-48 remain in the application. Reconsideration of the claims is respectfully requested.

Claims 1-9, 11-15, 17-23, and 26-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner (U.S. Patent No. 5,154,179) in view of Filler (U.S. Patent No. 5,948,384). The Examiner continues to assert that the combination of Ratner and Filler renders obvious independent claims 1, 20, and 28.

Although Applicants do not acquiesce to the Examiner's assertion, in order to expedite prosecution, independent claims 1, 20, and 28 have been amended to recite that the imaging material produces an image detectable by positron emission tomography (PET) *and* single photon emission computed tomography (SPECT). Support for this amendment may be found throughout Applicants' application as filed. As a non-limiting example of such support, claim 1 as originally filed recites, "at least one of positron emission tomography, and single photon emission computed tomography," one embodiment of which includes *both* PET and SPECT.

To reiterate from Applicants' Amendment dated February 24, 2009, Ratner discloses a device that may be inserted into a body subjected to *magnetic resonance imaging*, where the device carries a material exhibiting a characteristic under magnetic resonance imaging (MRI) that differs substantially from that of the body so that the visibility of the member under MRI is enhanced (see abstract of Ratner). The imaging material carried by the device may be selected from ferromagnetic materials (see column 4, lines 24-28) and paramagnetic materials (see

column 6, lines 34-47). In an embodiment, non-paramagnetic substances may also be used (see column 6, lines 48-54).

Ratner further discloses that the material may also be formed from other contrast agents (such as, e.g., a material that is relatively radiopaque) so that it can be observed under, e.g., x-ray (see column 9, lines 4-8). It is submitted that the other contrast agent is used *in addition* to the material selected for producing magnetic resonance images. Applicants submit that Ratner does *not* disclose that the imaging material is detectable by positron emission tomography *and* single photon emission computed tomography (as recited in amended claims 1, 20, 28).

Applicants submit that Filler *fails* to supply the deficiency of Ratner noted above. Filler discloses that particulate agents incorporating a gamma or electron emitter radionuclide may be detectable by gamma detects, scintigraphy, *or* SPECT (see column 3, lines 63-67). Applicants submit that Filler does *not* disclose that the particulate agents are detectable by *both* positron emission tomography *and* SPECT. For at least this reason, it is submitted that the combination of Ratner and Filler *fails* to disclose all of the elements of amended claims 1, 20, and 28.

Furthermore, Filler discloses *particulate* agents that may be used for diagnostic imaging of the neural system. It is submitted that one skilled in the art would not refer to the teachings of a reference (such as the Filler reference) that uses a particulate agent specifically designed for, e.g., SPECT, in an imaging method that employs MRI.

Applicants further submit that there would be no motivation to combine the references given the fact that Ratner discloses an internal marking device, while Filler does *not* (see column 2, lines 51-53 of Filler, which states, in part, “the pharmaceutical agent preferably has a diagnostic marker that can be detected *non-invasively*” (emphasis added).)

For at least the reasons stated above, Applicants submit that the combination of Ratner and Filler *fails* to disclose all of the elements of independent claims 1, 20, and 28, thereby *failing* to render the claims obvious. As such, it is submitted that Applicants’ invention as defined in independent claims 1, 20, and 28, as well as in those claims depending therefrom, is not anticipated, taught or rendered obvious by Ratner and Filler, either alone or in combination, and patentably defines over the art of record.

Claims 10 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner and Filler, and further in view of Valley, et al. (U.S. Patent No. 5,766,151). For the reasons stated above, it is submitted that the combination of Ratner and Filler *fails* to disclose all of the elements of independent claims 1 and 28, from which claims 10 and 38 depend, respectively. It is further submitted that Valley *fails* to supply the deficiencies of Ratner and Filler. Since the combination of Ratner, Filler, and Valley does render obvious Applicants' invention as defined in independent claims 1 and 28, Applicants submit that claims 10 and 38 are patentable at least because of their dependency from claims 1 and 28, respectively. As such, it is submitted that Applicants' invention as defined in claims 10 and 38 is not anticipated, taught, or rendered obvious by Ratner, Filler, and Valley, either alone or in combination, and patentably defines over the art of record.

Claims 16, 24, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner and Filler, and further in view of Unger, et al. (U.S. Patent No. 5,736,121). For the reasons stated above, it is submitted that the combination of Ratner and Filler *fails* to disclose all of the elements of independent claim 1 (from which claim 16 depends) and claim 20 (from which claims 24 and 25 depend). It is further submitted that Unger *fails* to supply the deficiencies of Ratner and Filler. Since the combination of Ratner, Filler, and Unger does not render obvious Applicants' invention as defined in independent claims 1 and 20, Applicants submit that claims 16, 24, and 25 are patentable at least because of their dependency from one of claims 1 or 20. As such, it is submitted that Applicants' invention as defined in claims 16, 24, and 25 is not anticipated, taught, or rendered obvious by Ratner, Filler, and Unger, either alone or in combination, and patentably defines over the art of record.

Claims 39, 40, 41, 43, 47, and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner in view of Bankiewicz, et al. (U.S. Patent No. 6,309,634). The Examiner asserts that the combination of Ratner and Bankiewicz discloses all of the elements of independent claim 39.

Although Applicants do not acquiesce to the Examiner's assertion, in order to expedite prosecution, independent claim 39 has been amended to recite that the first image is derived from PET *and* SPECT. Support for this new recitation may be found through Applicants' application.

As a non-limiting example of such support, claim 39 as originally filed recites that “the first image is derived from at least one of PET and SPECT...”, an embodiment of which includes *both* PET and SPECT.

As stated above, Ratner does *not* disclose that the image is derived from both PET and SPECT. Applicants submit that Bankiewicz *fails* to supply the deficiencies of Ratner. Bankiewicz discloses a gene therapy for the treatment of central nervous system disorders (see column 1, lines 24-28). As part of the gene therapy method, the target site for delivering recombinant AVV virions carrying a transgene to the central nervous system may be visualized for exact placement of the cells. In an embodiment, fiducial markers used for PET scanning were placed on a frame for co-registration of MRI and PET images (see column 32, lines 8-16). Applicants submit, however, that the image using PET scanning does *not* include both PET *and* SPECT.

For the reasoning stated above, Applicants submit that the combination of Ratner and Bankiewicz *fails* to disclose all of the elements of independent claim 39. As such, it is submitted that Applicants’ invention as defined in independent claim 39, and in those claims depending therefrom, is not anticipated, taught, or rendered obvious by Ratner and Bankiewicz, either alone or in combination, and patentably defines over the art of record.

Claim 42 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner and Bankiewicz, and further in view of Driscoll, Jr, et al. (U.S. Patent No. 5,067,162). For the reasoning stated above, it is submitted that the combination of Ratner and Bankiewicz *fails* to disclose all of the elements of independent claim 39, from which claim 42 depends. It is further submitted that Driscoll *fails* to supply the deficiencies of Ratner and Bankiewicz. Since the combination of Ratner, Bankiewicz, and Driscoll does not render obvious Applicants’ invention as defined in independent claim 39, Applicants submit that claim 42 is patentable at least because of its dependency from claim 39. As such, it is submitted that Applicants’ invention as defined in claim 42 is not anticipated, taught, or rendered obvious by Ratner, Bankiewicz, and Driscoll, either alone or in combination, and patentably defines over the art of record.

Claim 44 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner, Bankiewicz, and Driscoll, and further in view of Chaney, et al. (U.S. Patent No. 5,926,568). For

the reasoning stated above, it is submitted that the combination of Ratner, Bankiewicz, and Driscoll *fails* to disclose all of the elements of independent claim 39, from which claim 44 depends. It is further submitted that Chaney *fails* to supply the deficiencies of Ratner, Bankiewicz, and Driscoll. Since the combination of Ratner, Bankiewicz, Driscoll, and Chaney does not render obvious Applicants' invention as defined in independent claim 39, Applicants submit that claim 44 is patentable at least because of its dependency from claim 39. As such, it is submitted that Applicants' invention as defined in claim 44 is not anticipated, taught, or rendered obvious by Ratner, Bankiewicz, Driscoll, and Chaney, either alone or in combination, and patentably defines over the art of record.

Claim 46 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratner and Bankiewicz, and further in view of Chaney. For the reasoning stated above, it is submitted that the combination of Ratner and Bankiewicz *fails* to disclose all of the elements of independent claim 39, from which claim 46 depends. It is further submitted that Chaney *fails* to supply the deficiencies of Ratner and Bankiewicz. Since the combination of Ratner, Bankiewicz, and Chaney does not render obvious Applicants' invention as defined in independent claim 39, Applicants submit that claim 46 is patentable at least because of its dependency from claim 39. As such, it is submitted that Applicants' invention as defined in claim 46 is not anticipated, taught, or rendered obvious by Ratner, Bankiewicz, and Chaney, either alone or in combination, and patentably defines over the art of record.

In summary, claims 1-44 and 46-48 remain in the application. It is submitted that, through this Amendment, Applicants' invention as set forth in these claims is now in a condition suitable for allowance. Should the Examiner believe otherwise, it is submitted that the claims as amended qualify for entry as placing the application in better form for appeal.

Appln. S.N. 10/624,261
Amdt. dated September 11, 2009
Reply to Final Office Action of May 11, 2009
Docket No. UMJ-107-B (UM 1806p1)
Page 16 of 16

Further and favorable consideration is requested. If the Examiner believes it would expedite prosecution of the above-identified application, the Examiner is cordially invited to contact Applicants' Attorney at the below-listed telephone number.

Respectfully submitted,

DIERKER & ASSOCIATES, P.C.

/Julia Church Dierker/

Julia Church Dierker
Attorney for Applicants
Registration No. 33368
(248) 649-9900, ext. 25
juliad@troypatent.com

3331 West Big Beaver Rd., Suite 109
Troy, Michigan 48084-2813
Dated: September 11, 2009
JCD/AMS